

REMARKS

This application has been reviewed in light of the Office Action dated September 8, 2006. Claims 10, 20, 30 and 33-53 are presented for examination, of which Claims 10, 20 and 30 are in independent form. Claims 10, 20 and 30 have been amended to define still more clearly what Applicants regard as their invention. Favorable reconsideration is requested.

The specification has been amended to conform the Summary of Invention section to the amended claims.

Claims 10, 20, 30 and 33-53 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The independent claims have been carefully reviewed and amended as deemed necessary to ensure that they conform fully to the requirements of Section 112, second paragraph, with special attention to the points raised in paragraph 7 of the Office Action. It is believed that the rejection under Section 112, second paragraph, has been obviated, and its withdrawal is therefore respectfully requested.

Claims 10, 20, 30 and 33-53 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Application Publication No. 2002/0140748 (Kanaya) in view of U.S. Patent No. 6,338,539 (Kobayashi).

As shown above, Applicants have amended independent Claims 10, 20 and 30 in terms that more clearly define what they regard as their invention. Applicants submit that these amended independent claims, together with the remaining claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

Claim 10 is directed to an inventory management system that manages an inventory of an expendable. The system includes: (1) a first storage unit, adapted to store inventory information indicating an inventory number of an expendable which is mounted in a printer and can be replaced, the inventory number being subtracted based on replacement of the expendable in the printer; (2) a receiver unit, adapted to receive absence information indicating that the inventory number of the expendable is zero or less than a predetermined number; (3) an instruction unit, adapted to provide, to an external apparatus via a communication line, a delivery instruction for delivery of a new expendable to the printer; (4) a second storage unit, adapted to store history information indicating a history of the delivery instruction provided by the instruction unit; and (5) an alarm sending unit, adapted to send an alarm to the external apparatus via the communication line when a new reception of the absence information is received by the receiver unit, after the instruction unit provides the delivery instruction for delivery of the new expendable, if the history information is present in the second storage unit. The alarm sending unit does not send the alarm to the external apparatus even when a new reception of the absence information is received by the receiver unit, if the history information is absent in the second storage unit.

Among other notable features of Claim 10 are: (1) an instruction unit, adapted to provide, to an external apparatus via a communication line, a delivery instruction for delivery of a new expendable to the printer; (2) a second storage unit, adapted to store history information indicating a history of the delivery instruction provided by the instruction unit; and (3) an alarm

sending unit, adapted to send an alarm to the external apparatus via the communication line when a new reception of the absence information is received by the receiver unit, after the instruction unit provides the delivery instruction for delivery of the new expendable, if the history information is present in the second storage unit, wherein the alarm sending unit does not send the alarm to the external apparatus even when a new reception of the absence information is received by the receiver unit, if the history information is absent in the second storage unit.

By virtue of the structure recited in Claim 10, the inventory management system provides, to an external apparatus, a delivery instruction for delivery of a new expendable to a printer, stores the history of the provided delivery instruction as history information, and when new absence information is received (after the delivery instruction for delivery of the new expendable is provided to the external apparatus), sends or does not send an alarm to the external apparatus depending on whether the history information is present or absent.

Kanaya does not teach or suggest all of these features and, from the Office Action, it is understood that the Examiner does not disagree.

Kanaya relates to a method of monitoring a residual quantity of ink remaining in an ink reservoir. Kanaya discusses a printer having an ink jet head that ejects ink droplets and an ink reservoir that has a predetermined capacity to store ink. The ink jet head ejects ink droplets to create ink dots on a printing medium to print an image on an image medium. The printer also includes: (1) a supply condition detection unit that detects an ink supply condition, which affects a supply of ink to the ink jet head; (2) an ink ejecting number counter that counts an ink ejecting

number ejected by the ink jet head; and (3) a residual ink quantity monitor that monitors a residual quantity of ink remaining in the ink reservoir by taking into account the ink supply condition detected by the supply condition detection unit, based on the ink ejecting number counted by the ink ejecting number counter and the predetermined capacity of the ink reservoir.

Kanaya discusses, in paragraphs [0032] to [0034], giving an alarm to an external computer or to another printer when the residual quantity of ink in the ink reservoir becomes smaller than a predetermined value, and that the computer monitors the residual quantity of ink in the ink reservoir. However, Kayana states that “the only requirement for giving an alarm is that the difference between the cumulative amount of ink ejection and the predetermined capacity of the ink reservoir substantially becomes not greater than a predetermined value” ([0032, lines 16-19]). Thus, the determination to as to whether to produce an alarm does not depend on whether history information is present or absent. Nothing has been found in Kanaya that would teach or suggest “an instruction unit, adapted to provide, to an external apparatus via a communication line, a delivery instruction for delivery of a new expendable to the printer,” “a second storage unit, adapted to store history information indicating a history of the delivery instruction provided by said instruction unit” and “an alarm sending unit, adapted to send an alarm to the external apparatus via the communication line when a new reception of the absence information is received by said receiver unit, after said instruction unit provides the delivery instruction for delivery of the new expendable, if the history information is present in said second storage unit, wherein said alarm sending unit does not send the alarm to the external apparatus

even when a new reception of the absence information is received by said receiver unit, if the history information is absent in said second storage unit,” as recited in Claim 10.

Kobayashi does not remedy the deficiencies of Kanaya. Kobayashi relates to an ink jet recording device including an external switch and a device for detecting the amount of ink left in each ink cartridge. When an instruction to replace an ink cartridge is generated by a user pressing a switch, or when the device detects an ink end of the cartridge, only the ink cartridge to be replaced is exposed through a window in the recording device.

The Office Action cites column 5, lines 25-28 as disclosing the instruction unit of Claim 10. Applicants disagree. That passage merely discussed that when an instruction is given to replace at least one of two ink cartridges 7 and 8, the ink level of the ink left in the other ink cartridge is checked. However, nothing has been found in Kobayashi that would teach or suggest “an instruction unit, adapted to provide, to an external apparatus via a communication line, a delivery instruction for delivery of a new expendable to the printer,” as recited in Claim 10.

The Office Action cites step 187 in Figure 12 and step 211 in Figure 17 as disclosing the second storage unit of Claim 10. Applicants disagree. Steps S187 and S211 merely show that the printer stores the fact that an ink cartridge has been replaced in its suction status storing means 46 (see column 16, lines 28-32). However, Applicants have found nothing in Kobayashi that would teach or suggest “a second storage unit, adapted to store history information indicating a history of the delivery instruction provided by said instruction unit,” as recited in Claim 10 (emphasis added).

Nor have Applicants found anything in Kobayashi that would teach or suggest “an alarm sending unit, adapted to send an alarm to the external apparatus via the communication line when a new reception of the absence information is received by said receiver unit, after said instruction unit provides the delivery instruction for delivery of the new expendable, if the history information is present in said second storage unit, wherein said alarm sending unit does not send the alarm to the external apparatus even when a new reception of the absence information is received by said receiver unit, if the history information is absent in said second storage unit,” as recited in Claim 10 (emphasis added).

Indeed, neither Kanaya nor Kobayahsi, separately or in combination, even hint of an inventory management system that provides, to an external apparatus, a delivery instruction for delivery of a new expendable to the printer, stores the history of the provided delivery instruction as history information, and when new absence information is received after the delivery instruction for delivery of the new expendable is provided to the external apparatus, sends or does not send an alarm to the external apparatus depending on whether the history information is present or absent.

Accordingly, Applicants submit that Claim 10 is patentable over Kanaya and Kobayashi, whether considered separately or in any permissible combination (if any).

A review of the other art of record has failed to reveal anything which, in Applicants’ opinion, would remedy the deficiencies of the art discussed above, as a reference against Claim 10.

Independent Claims 20 and 30 are method and computer program claims respectively corresponding to apparatus Claim 10, and are believed to be patentable the cited art for at least the same reasons as discussed above in connection with Claim 10.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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